



Ethiopian TVET-System



BASIC ELECTRICAL/ELECTRONIC EQUIPMENT SERVICING Level I

Based on May 2011 Occupational standards

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Module Title: Using Hand Tools and Testing Instruments

TTLM Code: EELBEE1 TTLM 0919v1

This module includes the following Learning Guides

LG06:- Sort and remove unnecessary Items

(LG Code: EEL BEE1 M02 LO1-06)

LG07:- Arrange items

(LG Code: EEL BEE1 M02 LO2-07)

LG08:- Maintain work area, tools and equipment

(LG Code: EEL BEE1 M02 LO3-08)

LG09: Follow standardized work process and procedures

(LG Code: EEL BEE1 M02 LO4-09)

LG10: Perform work spontaneously

(LG Code: EEL BEE1 M02 LO5-10)



Instruction Sheet

LG06: Sort and remove unnecessary items

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- **sorting** reusable and recyclable materials
- removing and disposing off Unnecessary items

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- sort reusable and recyclable materials
- remove and dispose off Unnecessary items

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below
3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-checks” in each information sheet.
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
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Information Sheet-1

sorting reusable and recyclable materials

1.1 introduction of Housekeeping

Good housekeeping involves every phase of industrial operations and should apply throughout the entire premises, indoors and out. It is more than mere cleanliness. It requires orderly conditions, the avoidance of congestion, and attention to such details as an orderly layout of the whole workplace, the marking of aisles, adequate storage arrangements, and suitable provision for cleaning and maintenance

A clean, well-ordered, attractive work environment sets the tone of your establishment. It encourages tidy work habits in employees. It helps reduce fatigue. It promotes good worker-management relations. It also gives a lift to morale, which is reflected in the quality of production and overall efficiency. Good housekeeping is also a good advertisement for your company. Customers and clients have more confidence in an organization when they see work being carried out efficiently in clean, pleasant, well ordered surroundings. There's an even more important reason why good housekeeping matters — it makes the undertaking a safer place to work in.

Good housekeeping is a vital factor in preventing accidents. The great majority of all work accidents are caused during the handling of goods or materials, and by people falling, being hit by falling objects, or striking against objects in the workplace. All these causes can be reduced by good housekeeping practices—in fact, good housekeeping is the only cure for hundreds of accidents that occur. Here are some kinds of accidents commonly caused by *bad* housekeeping:

- Tripping over loose objects on floors, stairs and platforms
- Articles dropping from above
- Slipping on greasy, wet or dirty surfaces
- Striking against projecting, poorly stacked, or misplaced material
- Tearing the hands or other parts of the body on projecting nails, wire, steel strapping on bales or crates, etc.



Typical examples of poor housekeeping that lead to these accidents are:

- Excessive material, waste or chips in the working area
- Congested aisles
- Tools left on machines
- Waste containers overflowing.
- Lockers and workrooms in disorder
- Acids in open containers
- Broken glass
- Electric leads or air lines across aisles
- Dirty light fittings, windows and skylights

Where housekeeping is bad, fire is a constant hazard. It can be caused by many housekeeping problems—such as oil-soaked rags and clothing igniting from spontaneous combustion; dust collectors not being properly or frequently cleaned; or piles of paper and other packing materials being allowed to accumulate. Poor housekeeping can also lead to infestation by pests such as rodents and cockroaches and create serious health risks.

1.2. Establishing A Housekeeping Program:

A good housekeeping program must include:

- careful planning,
- a clean-up schedule or policy,
- effective inspection, and
- Continuous supervision and enforcement of housekeeping rules.

Inspect your area for unnecessary tools, equipment, parts, materials and supplies; items that are not needed should be sent to the storage room or used for salvage.

Reorganize the storage area in your workplace. Establish one or more storage areas for holding finished products and daily supplies; storage areas should not obstruct aisles and work areas. Create a daily clean-up policy and program.

Periodically review the house keeping rules, clean-up policies and procedures.

1.3. SORTING: REUSABLE, RECYCLABLE MATERIALS

Disorder is neither productive nor safe



Source: Micazen Consulting & Technologies (<http://www.micazen.com/>)

- **SORT** means that separating the wanted from unwanted and removing all items from the workplace that are not needed for current production or transactional operations. The emphasis of Sort is on stratification management and being able to spot the unwanted and unnecessary before they become problematic (Osada, 1993).

Sort - Seiri



- ✓ **It does not mean** that you only remove the items that you know you may never need
- ✓ **It does not mean** that you simply arrange things in a neater fashion
- **Ask Yourself :Is this item necessary to do this job? Do we really need these items?**



There are items which seems to be waste of one product or task but can be used directly for other purpose and other type of items can be used again after reprocess them. These items are known as **reused** and **recyclable** items respectively. These should be keep for future use and garbage the non-recyclable and non-reused items.

Sort - Seiri

Meaning	Methods	Benefits
This means distinguishing or sort out between 'wanted' and 'unwanted items' at place of work and removal of unwanted items	<ul style="list-style-type: none"> First decide what is necessary and what is unnecessary. To find out unnecessary items you should not only check the floor but also shelves, lockers, storehouse, stairs, roofs, notice boards, etc. Put a red tag on unnecessary items and keep them in a separate area. Discard or throw those items which have not been used in the past one year. Things used once in 6 to 12 months may be stored at a distance from work station. Things used more than once a month should be available at a central point in the workplace. Things used hourly/everyday/once a week should be near the work station or may be worn by or kept in the pocket of your worker there. 	<p>Your useful floor is saved.</p> <p>Your searching time of tools, materials, and papers is reduced.</p> <p>You have better flow of work.</p> <p>Your inventory cost of unnecessary items is reduced.</p>

Information Sheet-2	Removing and Disposing off Unnecessary items
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2.1. REMOVING UNNECESSARY ITEMS

Some types of unnecessary items are:

- **Non Recyclable material**
- **Un serviceable tools and equipments**
 - ✓ Outdated or broken jigs and dies
 - ✓ Worn-out bits, inserts
 - ✓ Outdated or broken tools or inspection equipment
 - ✓ Electrical tools/equipment with broken cords
- **Pictures, Posters and other materials**
 - ✓ Outdated posters, signs, notices, and memos
- **Waste materials**
 - ✓ Defective or excess unneeded items that accumulate
 - ✓ Old rags and other cleaning supplies

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2.2. Places where unnecessary items accumulate

Some locations where unneeded items tend to accumulate are:

- in rooms or areas not designated for any particular purpose
- in corners next to entrances or exists
- Along interior and exterior walls, next to partitions, and behind pillars.
- Under the eaves of warehouses.
- under desks and shelves and in desk and cabinet drawers
- near the bottom of tall stacks of items
- on unused management and production schedule boards
- in tools boxes that are not clearly sorted



Unused machinery or equipment



Obsolete Equipment

2.3. Disposal methods include:

- Throwing away.
- Selling.
- Returning to the vendor.
- Lending out.
- Distributing to a different part of the company.
- Sending to the central red-tag holding area.



This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Arranging Items
- Arranging work area
- Prioritizing activities based on instructions.
- Providing **items** with clear and visible **identification marks** based on procedure
- keeping clear and accessible Safety equipment and evacuation passages

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Arrange Items
- Arrange work area
- Prioritize activities based on instructions.
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Information Sheet-1

Arrange items

1.1. ARRANGING YOUR WORK AREA FOR EFFICIENCY

The arrangement of the work area – particularly of your desk or work station – should be governed by two considerations:

- Easy access to necessary work materials
- Elimination of distraction

Ordinarily, an uncluttered desk is most conducive to efficient work and greater productivity. Your telephone and dictating machine, if you are right handed, should probably be on the left side of the desk leaving your right hand free for note taking. Other equipment you use, such as a computer or a fax machine, should be placed where you can use it efficiently. One corner of your desk or your credenza near your telephone is an ideal spot for your calendar and “Do List” for convenient reference and to help you stay focused on your top priorities. Covering your calendar prevents the nagging annoyance or feeling of hurry that sometimes comes from seeing a long list of items. An assistant or other departmental coordinator may also have a copy of your appointments or meeting times and will remind you of these commitments as the time approaches. Then you are free to concentrate on whatever is before you at the moment.

You also need an “out” basket to deposit items as you complete work on them for the assistant or mail clerk to handle as appropriate. You receive a psychological boost when you see the completed items stack up. The “in” basket, when placed somewhere other than your desk, eliminates the distraction of seeing incoming mail until you are ready to give it your attention at the scheduled time.

Desk drawers should hold any files you need frequently, such as “See Me” or “Talk To” files for key people. A folder labeled “Pending” holds any item of work that should be done within the next few days, but must wait for a report or information you have requested from someone else. This file should contain only those items that you know will receive your attention in less than a week.

All other pending items should be placed in a tickler or a follow-up file. The tickler file Contains 31 daily folders and 12 monthly folders. Items for the current month are in the numbered folders that you check daily or that your assistant gives to you daily. Be sure that your “Do List” provides for these items. Anything scheduled for attention later than the current month can be placed in the monthly folder and transferred to the daily file when the new month begins.

Another consideration in arranging the work area efficiently is the need for removing distractions. Knickknacks on the desk provide sources of subconscious distraction. Unfinished work also exerts a tremendous negative emotional effect and a feeling of urgency that destroys concentration. Remove these

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items from the desk to some unobtrusive location in your work area.

An efficient work area is comfortable as well as convenient. Light and temperature control are of prime importance. The furniture, including the desk and chairs, must be comfortable for you. Office decor, including color, decorations, and furniture style should be pleasing to you but not distracting. It is not really important that others approve your office decor if it is in basic good taste and is conducive to your productivity.

Plan placement of office furniture to eliminate distractions. If your desk faces a busy hallway, everyone who passes looks in and at least nods a greeting. This destroys your concentration. If no other arrangement is possible, a closed door prevents such interruptions.

If your desk faces away from the door, you do not see people passing and they are not as likely to stop for a chat.

Also consider that the location of your work area may be contributing to the number of drop-in visitors who interrupt your work. If your office or work area is near an important entrance or traffic area in your building, take steps to change the location of your office or install a door or partition to shield you from drop-in visitors. If changing your location or installing partitions is not an option, careful arrangement of your furniture can assist you in discouraging nonproductive interruptions.

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Information Sheet-2	Arranging work area
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2.1. ORGANIZED WORK AREA

You must keep your store well organized and your work area tidy. Customers can easily find what they are looking for in a well-organized and tidy store. It will make your job easier, and the area will be safer for everybody.

2.2. Keep Work Areas Tidy and Organized

Everyone should keep their home as neat and clean as possible. It is nice to live in a place where things are tidy and there is no dirt or mess. It is also safer because you won't slip on or fall over things on the floor. There are lots of jobs you need to do to make your home neat and safe to live in. For example:

- put your clothes away after you take of them
- wash your dirty clothes
- sweep the floor
- put rubbish in the bin
- wash dirty dishes
- put clean dishes in the cup board
- Wipe the kitchen benches.

Table.2.1. some people have a routine for doing these kinds of jobs example:

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Every day	<ul style="list-style-type: none"> • Sweep the floor. • Wash the dishes after every meal. • Hang clothes up.
Monday	Do the ironing.
Tuesday	
Wednesday	Put out rubbish bins.
Thursday	Pay the rent.
Friday	
Saturday	Do the shopping.
Sunday	Wash clothes.

You also need to be neat, ,clean and tidy in your work place during the day, your work area can become untidy . This is good for business. also, it can be unsafe for you, your work mates and your consumer

Stores have rules about being organized and work area. They are called housekeeping duties. You need to follow the rule carefully. These rules will you where items should be place, how to display items and what you need to do to keep your area neat clean.

2.3. organized

It is part of your job to keep your more looking good so that consumers want to come in. The score your work easier. You knowWhat you have to do it and when to do it.

You need to look after these work area

- Container
- Benches
- Sink
- Fitting rooms



- Point of- sales area
- Preparation areas
- Display
- furniture and shelves
- storage area



Fig. 2.1. Tidying shows you care about the store



It is very important to look after the places that are used by customers, like sales tables and the check out lanes in a super market. These areas can get very messy.

You need to neaten these areas often during the day to keep them tidy and safe.

- Put away wrapping paper and label after you have served a customer. Keep the counter clear to there is no clutter.
- Make sure the things that workers use are in the right place, like pencils in the drawer and address books on the desk
- Make sure stock is kept in piles or on racks in the way the store says, such as by size or manufacturer.
- Always tidy up after customers have looked at stock. Return items to their correct places in the store.
- Put away clothes and tidy fitting rooms after a customer has used them
- Replace labels on items if they have fallen off.
- Remove damage stock.
- Replace any brochures that are dirty

You cannot spend all day deaning up. You need to check when things need tidying and clean them quickly.



Information Sheet-3

Prioritize activities based on instructions.

3.1. PRIORITIZING ACTIVITIES

• How to Prioritize Work When Everything Is #1?

To help you manage your team's workload and hit deadlines, here are 6 steps to prioritizing projects that have a lot of moving parts.

- ✓ **Collect a list of all your tasks.** Pull together everything you could possibly consider getting done in a day. Don't worry about the order, or the number of items up front.
- ✓ **Identify urgent vs. important.** The next step is to see if you have any tasks that need immediate attention. We're talking about work that, if not completed by the end of the day or in the next several hours, will have serious negative consequences (missed client deadline; missed publication or release deadlines, etc.). Check to see if there are any high-pri dependencies that rely on you finishing up a piece of work now.
- ✓ **Assess value.** Next, look at your important work and identify what carries the highest value to your business and organization. As a general practice, you want to recognize exactly which types of tasks have top priority over the others. For example, focus on: client projects before internal work; setting up the new CEO's computer before re-configuring the database; answering support tickets before writing training materials, and so on. Another way to assess value is to look at how many people are impacted by your work. In general, the more people involved or impacted, the higher the stakes.
- ✓ **Order tasks by estimated effort.** If you have tasks that seem to tie for priority standing, check their estimates, and start on whichever one you think will take the most effort to complete. Productivity experts suggest the tactic of starting the lengthier task first. But, if you feel like you can't focus on your meatier projects before you finish up the shorter task, then go with your gut and do that. It can be motivating to check a small task off the list before diving into deeper waters.
- ✓ **Be flexible and adaptable.** Uncertainty and change is a given. Know that your priorities will change, and often when you least expect them to. But—and here's the trick—you also want to stay focused on the tasks you're committed to completing.



- ✓ **Know when to cut.** You probably can't get to everything on your list. After you prioritize your tasks and look at your estimates, cut the remaining tasks from your list, and focus on the priorities that you know you must and can complete for the day. Then take a deep breathe, dive in and be ready for anything.

3.2. Tools, Equipments and materials arrangement in store



Source: 5S Best Practices(www.5sbestpractices.ning.com).

- ✓ Store items together if they are used together, and store them in the sequence they are used.
- ✓ If tools are being set in order, design a system that keeps the tools in their location.
- ✓ Store infrequently used items away from the point of use.
- **Look at the area as if you were brought into the area to help out.**

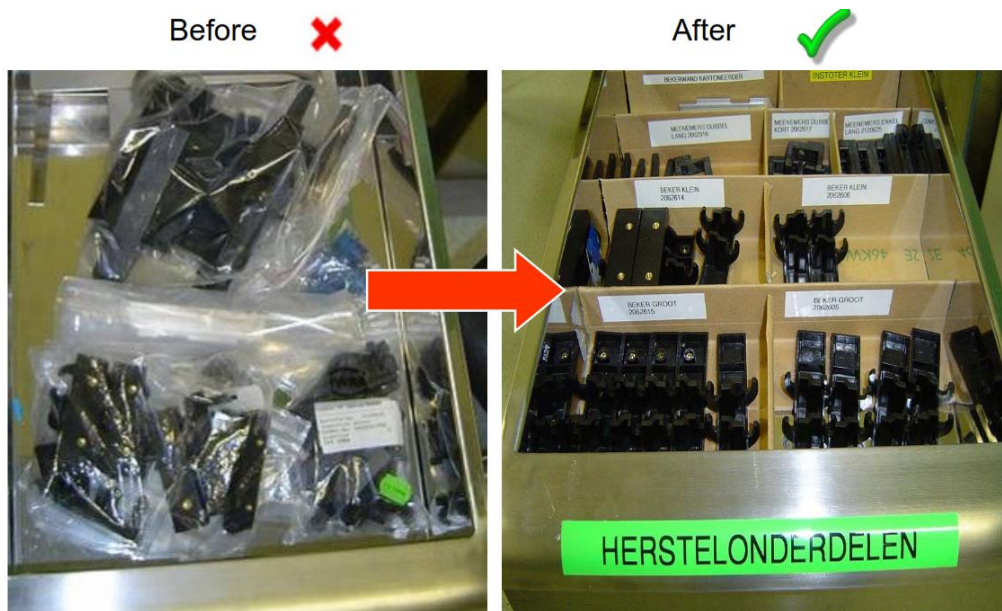
Would you be able to find & put things away immediately?





Information Sheet-4	Providing <i>items</i> with clear and visible <i>identification marks</i> based on procedure
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4.1. PROVIDING ITEMS WITH CLEAR AND VISIBLE IDENTIFICATION MARKS


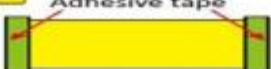


















After: Organized and labeled space

Before: Chemical laboratory

Fig. before and after keeping procedure



Labels	    
Signs	    
Figures	     
Partition lines	 



Instruction Sheet

LG 08 Maintain work area, tools and equipment

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- maintaining Cleanliness and orderliness of work area
- cleaning Tools and equipment
- Performing Minor repairs on tools and equipment
- Reporting defective tools and equipment to immediate supervisor

This guide will also assist you to attain the learning outcome stated in the cover page.

Specifically, upon completion of this Learning Guide, you will be able to –

- maintain Cleanliness and orderliness of work area
- clean Tools and equipment
- Perform Minor repairs on tools and equipment
- Report defective tools and equipment to immediate supervisor

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Information Sheet-1	maintaining Cleanliness and orderliness of work area
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1.1.

Maintaining the Work

Area

Maintaining the work area in a tidy, clean and safe way reflects a positive working area

image and helps create an environment that is pleasant for all customers and conducive to work. For different working area, there is different approach to do so. For example if the work area is Retail stores, they vary considerably from large department stores to much smaller specialty stores; therefore the housekeeping policies and procedures can also vary considerably. Team members must be familiar with their store's policies and procedures and occupational health and safety requirements as this will ensure the store looks its best and the correct image is being projected to customers.

There are many areas in a store that need to be considered, including:

- point of sale area
- counters
- walkways/aisles
- merchandise
- fittings and fixtures
- storerooms fitting rooms
- receiving docks

Areas where there is a high level of customer contact require special attention.

These can include:

- point of sale area
- walkways/aisles

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	This is a store that is very cluttered, and it doesn't seem to have any particular way of organising its work and display areas. Some of the merchandise is stacked on top of boxes - a potential safety hazard because they could easily topple over and injure someone. As you can see, the overall impression is that the store is untidy - a negative image for customers
	Here is a store that is well organised - the walkways and floor areas are uncluttered and the merchandise is organised neatly on various displays and fixtures. Customers could safely browse in this store without worrying about knocking anything over. The overall impression is that the store is clean and tidy - a positive image for customers



	<p>This point of sale area is well organised - the counter is clear and the till is not surrounded by unnecessary items. The overall look is neat and tidy.</p>
	<p>This point of sale area is untidy and disorganized, leaving the customer with a poor image of the shop.</p>

Keeping these areas clean and well organized will help to give the customer the impression that the store is professional and caring, and leave them with positive memories of a pleasant buying experience. Usually you find yourself working at a hectic pace, especially on busy days. Sometimes it seems easier to leave a bit of a mess behind when you finish a task, because you know you can go back and clean it up later. While this might sound like a sensible approach, what often happens is that you don't get time to go back and clean it up, so the mess remains for all your customers to see. The other problem is that if you do this a few times during the day, there's a great big mess to clean before you go home! Cleaning up a big mess is usually the last thing you feel like when you've had a busy day. The best solution is to clean as you go! The final point to consider about the "Clean As You Go" technique is that in some situations, it may be inappropriate to clean your work area. E.g., if customers are in the store, you wouldn't get the vacuum cleaner out and start cleaning the carpet. If you're unsure, check your store's policy and/or procedures, or ask your manager. The counter area in your store is very important, because customers often spend a lot of time there. Many stores fill their counter areas up with what are known as "impulse lines" - usually lower priced items that catch the customer's eye, making them buy the item on impulse.



When applying housekeeping procedures to your counter area, five key points must be considered.

- 1) Clean
- 2) Safe
- 3) Uncluttered
- 4) Well organized
- 5) Customer friendly

Keeping these five key points in mind at all times will ensure that your counter area contributes to the overall professional and positive image that your store presents.



Information Sheet-2

cleaning Tools and equipment

2.1. CLEANING TOOLS AND EQUIPMENTS

• Manual Cleaning Equipments Brushes

The brushes are devices with bristles, wire or other filaments, used for cleaning. Brushes used for cleaning come in various sizes, such as very small brushes for cleaning a fine instrument, toothbrushes, the household version that usually comes with a dustpan, or the broomstick. Hall brooms are even larger and are used for cleaning large areas. Cleaning brushes also include brushes for cleaning the toilet, washing glass, finishing tiles, and sanding doors. There are mainly three types of brushes:

- ✓ Hard brush: have bristles that are stiff and well spaced. These are most suitable for removal of litter. Example: upholstery brush, carpet brush etc.
- ✓ Soft brush: have bristles that are flexible and set close together. They can be used to remove loose soil and litter. Example: tooth brush, feather brush, shoe brush, coat brush etc.
- ✓ Scrubbing brush: can be used to remove heavy soiling from small areas or by the use of mechanical scrubbing machines, if possible. Example: deck scrubber, club shaped/ hockey stick shaped toilet brush, etc.

.2. Mops

A mop is a tool generally used for cleaning floors, although when possible it is also used for cleaning other surfaces, for example tiled walls, to avoid unhygienic working conditions. The following are the different types of mops. .

• Dry mop, dust mop

A dry mop or dust mop is designed to pick up dry, loose contamination like dust, earth and sand from the floor surface. It consists of yarn and / or microfiber and is used as a first step in cleaning a floor. Dry mops can be similar to the yarn wet mop, but with wider eyes and shorter hairs than wet mops. Professional dry mops consists of a flat sheet of micro fiber textile or sheets with a surface of looped yarn, usually about 15 cm wide, and comes in variable lengths (usually 30 to 100 cm). The professional type is intended for fastening on long handle with a flat pad with the aid of Velcro or a pouch on the mop, in which the pad on the handle fits. The dry mop can in many instances replace a broom and has the ability to hold a limited amount of dust or sand within itself. Ideally, it should be machine washed when it becomes saturated with dust.

• Wet mop, moist mop

A wet mop or moist mop is, in professional cleaning, used as a second step in the cleaning of a surface. The wet mop is swept over the surface to dissolve and absorb fat, mud and dried-in liquid contaminations.

• Yarn mop

In daily usage, a mop is usually equal to a yarn mop. The mop (eye) consists of thick strings of Long yarn (about 25 cm) or, in newer models, Soft strands of water-absorbing fabric. A yarn Mop is usually mounted on a long (about 1.5 m) Handle with a ganged end on which the mop can be fastened by turning it clockwise. To clean a floor, the mop is soaked in a bucket of water, usually mixed with a cleaning solution and swept against the surface. Some buckets include a wringer to strain excess water from the mop, so as not to saturate the floor and as not to leave excessive water on the floor. Leaving too much water on the floor will usually



result in dust collection and thus result in a less clean floor. Yarn mops are also often used to clean up liquid spills.

- **Mop for pre moistening**

In professional cleaning, mops are often pre impregnated with an ideal amount of liquid. This ideal amount is often recommended by the manufacturer in terms of weight percent of water per dry weight mop, (175% water). Mops for pre-moistening are flat sheets of (often micro fiber) textile, usually about 15 cm wide, and comes in variable lengths (usually 30 to 100 cm). Mops for pre-moistening is fastened on a long handle with a flat pad with the aid of Velcro or a pouch on the mop, in which the pad on the handle fits.

- **Pre-moistening**

Pre-moistening can be done with a special washing machine or by hand by simply folding and packing the mops tight in a container and pouring the measured amount of water over them. The mops will then need about 5 to 10 min for the liquid to distribute evenly in their tissue before use. Advantages with remoistening are:

- The cleaner does not have to have a bucket of water with him / her when cleaning the floor, but simply carries an appropriate amount of mops.
- ✓ The risk of over-wetting the floor and leaving pools of water which collects dust is eliminated if the wetting is ideal.
- **Hot mop** Wet mop is also called the hot mop, which works on a similar concept to a steam iron. After adding water, it is heated to make the water exude on top of a floor, which can then be cleaned without using a cleaning solvent. These can work best on surfaces where a regular mop would also be used, such as floors, hearths, and laminates.

.3. **Broom**

A broom is a cleaning tool consisting of stiff fibers attached to, and roughly parallel to, a cylindrical handle, the broomstick. A smaller whisk broom or brush is sometimes called a duster.

- **Melamine Foam**

Melamine foam is a foam-like material consisting of a formaldehyde-melamine-sodium bisulfate copolymer. The foam, because of its micro porous properties, may remove otherwise "unclean able" external markings from relatively smooth surfaces. For example, it can remove crayon, magic marker, and grease from painted walls, wood finishing's, and grime from hub caps.

- **Squeegees**

A squeegee is a cleaning tool with a flat, smooth and thick rubber blade, used to remove or control the flow of liquid on a flat surface. It is used for cleaning floors and small thin and flexible squeegee is used for cleaning windows.

2.3. **Cloths**

- **Floor cloths** it is a yarn fabric usually made from loosely spun yarn. They are used for removal of spillages from the floor
- **Wipes and swabs**

These are cloths used for wet cleaning of surfaces above floor level.

- **Scrim** It is a loosely woven linen cloth which is absorbent and does not leave stains. They are suitable for cleaning glazed area.
- **Rags / disposable cloths**

This old discarded linen are obtained from the linen room and used for the purpose of general cleaning. They are discarded when heavily soiled.



- **5. Dust sheets** These are thin cotton sheets used to cover furniture especially during special/ spring cleaning. They are also old discarded linen obtained from linen room.
- **6. Druggist** is a sort of cheap stuff, very thin and narrow, usually made of wool, or half wool and half silk or linen; it may have been corded or plain. They are used for rugs, tablecloths, carpet square to protect the floor during bad weather and during redecoration.

.4. Hearth and bucket cloths

These are thick fabric cloths placed under the buckets to prevent marking of the floor/ surface.

.5. Chamois leather

It is a skin of chamois goat. They are used for cleaning windows and mirrors.

.6. Carpet Sweeper

Carpet sweeper is a mechanical device for the cleaning of carpets in place. They were popular before the introduction of vacuum cleaners and have been largely superseded by them. However, some restaurants continue to use them (as they are

Light weight and very quiet, enabling the wait staff to quickly clean crumbs up from the floor without disturbing other diners. A carpet sweeper typically consists of a small box. The base of the box has rollers and brushes, connected by a belt or gears. There is also a container for dirt. The arrangement is such that when pushed along a floor the rollers turn and force the brushes to rotate. The brushes sweep dirt and dust from the floor and deposit the particles into the container. Carpet sweepers would frequently have a height adjustment that enabled them to work on different lengths of carpet, or carpet less floors. The sweeper would usually have a long handle so that it could be pushed without bending over.

.7. Spray Bottle

A Spray Bottle is a bottle that can squirt, spray or mist fluids. A common use for spray bottles is dispensing cleaners and chemical formulation through a fine nozzle for cleaning.

.8. Mechanical Cleaning Equipments

Vacuum Cleaners

A vacuum cleaner uses an air pump to create a partial vacuum to suck up dust and dirt, usually from floors. Most hotels with carpeted floors possess a vacuum cleaner for cleaning. The dirt is collected by a filtering system or a cyclone for later disposal. Vacuum cleaners come in variety of models owing to their usage:

- Upright vacuum cleaners take the form of a cleaning head, onto which a handle and bag are attached. Upright designs usually employ a rotating brush-roll, which removes dirt through a combination of sweeping and vibration. There are two types of upright vacuums; dirty-fan / direct air, or clean-fan / indirect air.
- Canister (or cylinder) designs have the motor and bag in a separate canister unit (usually mounted on wheels) connected to the vacuum head by a flexible hose. Although upright units have been shown to be more effective (mainly because of the beaters), the lighter, more maneuverable heads of canister models are popular. Some up market canister models have "power heads", which contain the same sort of mechanical beaters as in upright units, such beaters are driven by a separate electric motor.
- Wet vacs or wet / dry vacuums - a specialized form of the canister vacuum - can be used to clean up wet or liquid spills. They commonly can accommodate both wet and dry spoilage. Some are also equipped with a switch or exhaust port for reversing the airflow, a useful function for everything from clearing a clogged hose to blowing dust into a corner for easy collection.
- Back-pack vacs are commonly used for commercial cleaning: They allow the user to move rapidly about a large area. They are essentially canister vacuum cleaners, except that straps are used to carry the canister unit on the user's back.



- Built-in or central vacuum cleaners move the suction motor and bag to a central location in the building and provide vacuum inlets at strategic places throughout the building: only the

hose and pickup head need be carried from room to room. Plastic piping connects the vacuum outlets to the central unit. The vacuum head may either be unpowered or have beaters operated by an electric motor or air-driven motor. The dirt bag in a central vacuum system is usually so large that emptying or changing needs to be done less often. Since this central unit is usually located outside the living area, no dust is recalcitrated back into the room being cleaned. In addition, because of the remote location of the motor unit, there is less noise in the room being cleaned than with a standard vacuum cleaner.

- 6. Robotic vacuum cleaners move autonomously, usually in a mostly chaotic pattern ('random bounce'). Some come back to a docking station to charge their batteries, and a few are able to empty their dust containers into the dock as well.
- Small hand-held vacuum cleaners, either battery-operated or mains powered, are also popular for cleaning up smaller spills.
- Drum vacuums are used in industrial applications. With such a configuration, a vacuum "head" sits atop of an industrial drum, using it as the waste or recovery container. Electric and Compressed Air powered models are common. Compressed air vacuums utilize the venturi effect. Most vacuum cleaners are supplied with various specialized attachments, tools, brushes and extension wands to allow them to reach otherwise inaccessible places or to be used for cleaning a variety of surfaces.



- **Scrubbing / Polishing Machines**

Scrubbing/ Polishing Machines consist of one large or several small brushes which revolve and scrub the floor while water and detergent are released from a tank attached to a machine. With suitable brushes this versatile machine can be used for shampooing carpets, polishing, spray buffing, spray cleaning or polishing floors.

- **Hot Water Extraction**

Hot water extraction also known "steam cleaning" is the method of deep rinse cleaning of the entire carpet. But actual live steam (vapor created at boiling point of water) is not employed in the cleaning process. Hot water extraction is a deep cleaning process that removes embedded soils that have been carried or blown over the carpet. A hot water extraction machine, whether portable or truck mounted, has a pump which dispenses water, under pressure, through spray nozzles into the carpet and a high powered vacuum system that sucks the dirty water into a holding tank within the extraction machine. This system includes a three step process:



- ✓ Pre-spray carpeted area with a detergent that is not too strong (or too alkaline). They may damage the carpet.
- ✓ Agitate with a power scrubber which utilizes a rotary brush to loosen soils. This will not only loosen soils but help cleaning agents penetrate into carpet fibers to deep clean the entire carpet fiber.
- ✓ A complete rinse with softened hot water is used. The clean, softened, hot water is sprayed onto the carpet fibers through spray nozzles. The spray rinses all added chemicals, cleaners, and dirt into an attached high powered vacuum shoe that sucks the dirty solution back into a holding tank on the extraction unit. The removed soil is held in the tank until it may be disposed of later in a sanitary drain, toilet, or proper waste facility. Solutions should not be dumped onto the ground outside, in storm sewers, or in the streets.

2.9. **Selection of Equipments**

As equipments are expensive, their selection is of utmost importance. The correct choice and quality of equipment could save costs due to break-downs, reduce fatigue and thereby demands on labor as also ensure efficiency in overall operations. In determining the purchase of equipments, the following need to be kept in mind.

- ✓ Quality of equipments by usage history in other organizations.
- ✓ Reliability of supplier to meet time deadlines.
- ✓ Transportation on time to replenish stocks/ replacements.
- ✓ Equipments should be light, well balanced and easy to manipulate.
- ✓ 5. Availability of future stocks.
- ✓ 6. Sturdiness in terms of usage.
- ✓ Cost factors.



Information Sheet-3

Performing Minor repairs on tools and equipment

3.1. PERFORMING MINOR REPAIRS

- **Minor Repair:** Includes replacing failed parts/components, lubricating gears and bearings, sharpening of damaged tips of the tools and tightening of loose nuts, bolts and screws.
- **Application of Lubricants**

Efficient operation of machinery largely depends not only on the lubricant selected but also on its method of application. Lubricants formerly were applied by hand, but modern machinery requires exact methods that can be precisely controlled. For most machinery, different methods of lubrication and types of lubricants must be employed for different parts. In an automobile, for example, the chassis is lubricated with grease, the manual transmission and rear-axle housings are filled with heavy oil, the automatic transmission is lubricated with a special-grade light oil, wheel bearings are packed with a grease that has a thickener composed of long fibers, and the crankcase oil that lubricates engine parts is a lightweight, free-flowing oil.

- **Application of Liquid Lubricants**

Mechanical devices to supply lubricants are called lubricators. A simple form of lubricator is a container mounted over a bearing or other part and provided with a hole or an adjustable valve through which the lubricant is gravity-fed at the desired rate of flow. Wick-feed oilers are placed under moving parts, and by pressing against them they feed oil by capillary action. Horizontal bearings are frequently oiled by a rotating ring or chain that carries oil from a reservoir in the bearing housing and distributes it along the bearing through grooves or channels. Bath oiling is useful where an oil-tight reservoir can be provided in which the bearing journal may be submerged; the pool of oil helps to carry away heat from contact surfaces. Splash-oiling devices are used where gears, bearings, or other parts contained in housings have moving parts that dip into the lubricant and splash it on the bearings or into distribution channels. Centralized oiling systems usually consist of a reservoir, pump, and tubes through which oil is circulated, while heaters or coolers may be introduced to change the viscosity of the lubricant for various parts of the system. Many oiling operations are automatically synchronized to start and stop with the machinery.

- **Application of Semisolid and Solid Lubricants**

Grease lubricants are semisolid and have several important advantages: They resist being squeezed out, they are useful under heavy load conditions and in inaccessible parts where the supply of lubricant cannot easily be renewed, and they tend to form a crust that prevents the entry of dirt or grit between contact surfaces. Grease is a mixture of a lubricant and a thickener; often it is made from a mineral oil and a soap. It may be applied in various ways: by packing enclosed parts with it, by pressing it onto moving parts from an adjacent well, by forcing it through grease cups by a spring device, and by pumping it through pressure guns. Solid lubricants are especially useful at high and low temperatures, in high vacuums, and in other applications where oil is not suitable; common solid lubricants are graphite and molybdenum disulfide.

- **Sharpening of tools**

Sharpening: is the gateway skill to getting good results from all of your edge tools – and it's particularly important to know how to do it right when you start using hand tools.

Sharpening in years past was difficult, as it necessitated keeping the proper angle on the knife blade so that you had a clean, consistent, flat edge, rather than a rolled edge that dulled



quickly. One tended, without any sort of guide, to rock the blade and create an inefficient cutting edge. A master carpenter could free-hand an angle like a machine, but most of us can't.

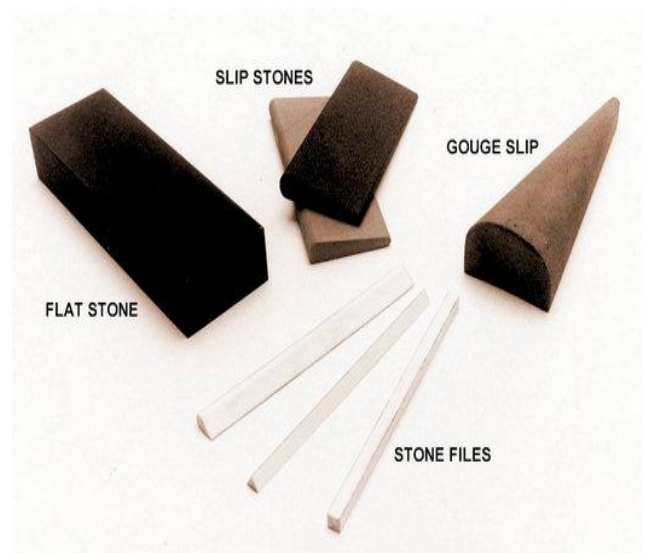
Tools to keep this from happening are now common. One of the more popular sharpening tools is the [Spyderco Triangle Sharpener](#) (and others of its type). It works on the principle that while the human eye has a hard time eyeballing a 21 degree angle, pretty much everyone knows what a straight, right angle looks like. By angling the sharpening media, the guesswork and much of the imprecision is removed, and all you have to do is move the knife down the media in a cutting motion toward the base, alternating sides. If you follow the directions, you can shave with the blade of your knife when you're finished.

3.2. HAND SHARPENING TOOLS

- **BENCH STONES**

A set of whetstones or bench stones is the core of most sharpening systems. These are available in different sizes, shapes, and grits.

The materials are either natural stone or synthetic abrasives in a hard binder. Many stones are used with light oil or water. The liquid cleans the surfaces, floating away the *swarf* (metal particles) so it won't clog the abrasives. On sharpening machines, liquids also serve as a coolant, keeping the tool steel from overheating and losing some of its hardness.



The strop shown was made by applying a smooth piece of pig leather to a plywood board with contact adhesive. When "loading" the leather with abrasives, you only need apply a very small amount-- sort of like coloring lightly with a crayon.

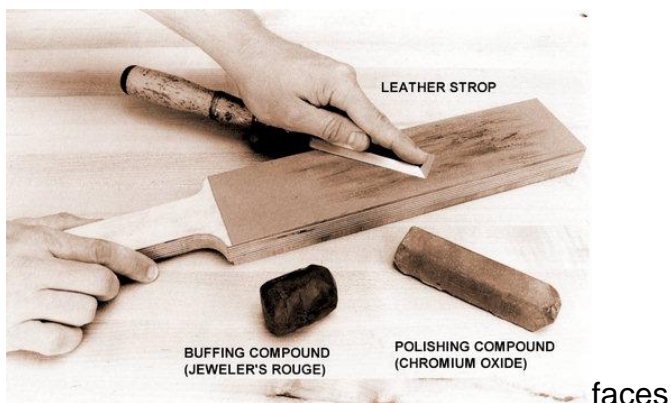
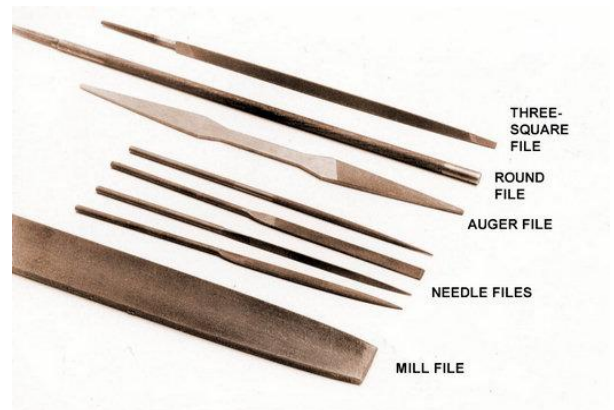
- **STROPS** are hard, flat, porous surfaces that can be loaded with ultrafine abrasives to polish cutting edges to a fine point. These abrasives include:
 - ✦ Silicon-carbide powders such as valve-grinding compound.
 - ✦ Natural buffing compounds like emery, Tripoli, or jeweler's rouge.
 - ✦ Synthetic polishing compounds like chromium oxide.
- Traditionally, strops are made from smooth leather and backed with wood or plywood. However, you can use any surface that is slightly porous. Parchment and paper both make excellent strops provided they are applied to stiff, flat material.



•FILES

Many woodworking tools, especially hand saws and drill bits, are designed to be sharpened with **files**. Although made of steel, files are hardened to a higher degree than wood cutting tools. Consequently, they will cut away the worn surfaces of a cutting edge.

Files come in a variety of sizes and shapes, some of them specially made for sharpening. Sharpening files tend to be **single-cut** with a **fine tooth pattern**. They may also have **safe edges** or faces – surfaces without teeth. An auger file, for example has one end with safe faces and the other with safe edges. This can be absolutely indispensable when you want to sharpen a cutting surface without changing the shape of those sur



adjacent to it.

Several types of files are useful for sharpening.

Three-square files are made to fit saw teeth, while round files will fit hook teeth and chain saw teeth.

You must have an auger file to sharpen drill bits.

Needle files are handy for sharpening cutting edges with intricate shapes, and mill files are handy for flat, straight cutting edges.



3.3. Tightening of nuts, bolts and screws.

- **Correct Tightening of Nuts and Bolts**

A nut and bolt is one of the commonest means of holding components together. The combination of a nut and bolt is essentially a wedge clamp - if you were to unwind the thread from a bolt it would form a ramp, and the nut thread moves up and down this ramp, progressively squeezing together the components to be fastened.

What actually holds the parts together is the friction between the two faces. The job of the nut and bolt is to squeeze them together with the appropriate force, and to hold them there.

All threaded fasteners have one or more 'correct' torque settings depending on the application and whether the threads are lubricated or dry. For non-critical fasteners it is often unnecessary to use a torque wrench, but this is not because it is possible to 'sense' the correct torque to apply without a torque wrench, but rather because there is such a wide range of tolerance between 'just snugged down' and 'just about to strip the thread' that you can an acceptable result without a torque wrench.

Most bolts that are done up without a torque wrench however, are either too tight or too loose. Small bolts tend to get done up too tight, large ones not tight enough.

If there is not a specific torque setting listed for the fastener you are tightening, then it is wise to refer to a generalized list of torque settings like this one from engineer's handbook.com. But be careful to refer to the correct table for thread, material, and lubrication for the application you are using.

If in doubt - use a torque wrench

3.4. TOOLS MAINTENANCE AND SAFETY RULES

Tools will last longer when properly kept and maintained. A good worker keeps and cares for his tools. The following are some pointers to follow in keeping hand tools in good condition.

- Be sure to inspect tools before using them. This is to check if they are in good working condition. The evidence is when you are able to use them smoothly and conveniently with ease and comfort.
- After using a tool, clean it thoroughly with a damp cloth before keeping it in a tool box or cabinet.



- Oil the metal parts of a tool to prevent any form of damage caused by air, water, or rust.

3.5. The following safety rules should be understood and strictly followed to avoid accidents while working.

- Avoid wearing loose clothing when working. Sleeves should be fit and shirtstucked in as much as possible. Remove ties, watches, rings, and other jewelry from your body.
- Report immediately injuries or accidents of any type to your teacher.
- Never put fasteners or any small metal articles in or near the mouth when working.
- Never throw tools of any type around. Make sure the sharp edge of cutting tools are away from the edge of the table or work bench.
- 5. Keep working areas clean and free from disposable materials.
- 6. Secure the help of your classmates when carrying heavy tools to avoid accidents.
- 7. Never use dull or damaged tools.
- Do not use tools with loose handles and ragged. Report cases like these to the teacher and do necessary repair and adjustments, if possible.
- Know and observe safety measures specific for each tool or operation.

3.6. Safety Requirements

For your protection, observe the following safety requirements:

- Follow all cautions, warnings, and instructions marked on the equipment.
- Ensure that the voltage and frequency rating of the power outlet matches the electrical rating labels on the system.
- Use properly grounded power outlets.

3.7. Performing minor repairs

Problems and Malfunctions of Hand Tools

All tools require regular maintenance to work properly. Some of the common minor repair activities that you should perform are:

- Clean all tools after each use with water and treat with a penetrating oil to prevent rust.
- Tools that require sharp edge must be sharpened regularly as sharp



tools are safer and more efficient to use. Various sharpening methods are used depending upon the tool. It is important to become familiar with the methods relevant to the tools you use.

- Check tools regularly for loose nuts and screws and tighten as needed.
- Sand rough handles and repair cracks as soon as they are noticed to prevent injury.
- Store tools in a dry area out of the elements. Hanging tools against a wall is an ideal way to organize the store tools in a shed.



Information Sheet-4	Performing Minor repairs on tools and equipment
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4.1. Reporting Problems and Malfunctioning of Tools

Every farm has its own set of procedures and systems to deal with the organizing, issuing and controlling tool stock. It is important that you find out who is responsible for different aspects regarding tools and equipment on the farm where you work. Also, you should know who you have to report problems or defects to. Do not attempt to fix, maintain or use a tool if you have not been trained to do so.

It is essential that problems and malfunctions be immediately reported to the correct person to prevent risk of injury through the use of the tools. It is important to respect the roles of the people placed in charge of organizing and maintaining tools because this also protects your safety. Supervisors need to be trained to check that laborers use tools in proper way.

Even when using a tool correctly, a certain way of handling the tool will cause premature wear or damage to it. Master artisans always take extremely good care of their tools in using, storing and maintaining it. Tools should ideally be allocated to specific persons who then have the responsibility

of looking after it. If tools are for „general“ use they are often left in the field or working place and a high percentage of replacement results from it. If tools are allocated to a specific person and marked as such control is very easier.

4.2. What follows are some tips on routine maintenance:

- Use the correct tool for the job.
- Keep tools in good condition. Handles should be tight and free from defect.
- Cutting tools should be kept sharp.
- Wedges and punches should be free from "mushroom heads".
- Use and maintain power tools according to their operator instruction



- Make sure power tools are properly grounded or are double insulated.
- Switch off and unplug power tools before changing blades or servicing and repairing.
- Wear clothing that is free of strings or loose ends that could catch.
- Wear appropriate personal protective equipment (PPE), such as glasses,
- Goggles, dust masks, face shields, hearing protection, etc.
- Keep bystanders at a safe distance.
- Keep all guards and shields in place.
- Unplug and store tools after use.
- Consider keeping power tools locked up to prevent unauthorized use.

4.3. Routine maintenance

Routine maintenance tasks

What follows is a check list for routine maintenance. Complete a visual inspection:

Tool:	YES	NO
1. Are tools in safe condition?		
2. Are instruction manuals available?		
3. Are power tools properly grounded?		
4. Are guards and shields in place?		
5. Is Personal Protective Equipment available?		
6. Are tools properly stored?		

- **If necessary:**
 - ✓ Tighten nuts and bolts.
 - ✓ Smooth off splinters and sharp points.
 - ✓ Tighten shafts.
 - ✓ Oil exposed steel e.g. spades, shovels and forks
 - ✓ Unblock pipes and nozzles.
 - ✓ Sharpen blunt tools.
 - ✓ Clean nozzles on sprayers.



- ✓ Check water and oil levels in machinery.
- ✓ Check and maintain cables and plugs.

4.4. Store Equipment Correctly and Safely

Try these six simple steps to a more organized tool storage area.

Step 1: Clear out the Junk

Sort out and discard all the junk that you do not need: keep only what you use and remove everything else that is still useful, but might be long in a different storage area. Throw away anything that is broken and just taking up space.

Acquire a stain-resistant floor and considerable storage in the form of cabinets, hooks and shelving racks (for hand tools and equipment)—suspended from painted walls—will transform a disorganized space into a neat and tidy one.

Step 2: Paint the Walls and Floors

Take measurements and draw a floor plan to help you visualize what will fit and where it can be placed. Don't forget to consider the walls for storage. This is also the ideal chance to paint the walls, especially if they are currently exposed plaster or brick walls. Use lighter colors in smaller spaces to make these appear bigger.

You may want to consider painting the floor before you start installing storage systems and moving everything back into the store. Preferably use an epoxy paint that is designed for floors.

- **Get started**

- ✓ 1. Before painting your floor, clean it thoroughly and use a degreaser to remove any grease or oily residue that could prevent the paint from adhering. Clean the floor thoroughly with the cleaning solution provided, or use a sugar-soap solution to remove grease stains and dirt. Wash the floor with water and let it dry.
- ✓ Mix the two parts of the epoxy kit. Allow it to stand for the required amount of time before you apply it.
- ✓ Use a medium pile roller and broom-handle attachment to apply the epoxy floor coat. First paint along the sides of the garage, leaving a channel down the middle of the floor.



- ✓ Paint the channel last. Follow their commended drying times on the pack. It is usually recommended that you wait between 16 and 24 hours for it to dry before you walk on the newly painted floor, but it's a good idea to wait 48 hours or longer before you move vehicles or large equipment onto the surface.

Step 3: Storing Smaller and Larger items

Many store room shave UN tapped potential that can be utilized to make room from ore storage. Shelving is vital—inexpensive shelves can be purchased from most co-operatives or more expensive custom-designed cabinets can be installed.

Keeping things in containers not only lets you get them off the work bench or the floor but also keeps them clean and dust free. Always use a label on opaque containers so you know what is inside them.

Step 4: Organize your work area:

Use transparent jars to store smaller items so that you can easily see what they contain

Step 5: Safety prop your expensive toolss such as secateurs, pliers, etc. Install a lockable latch on a cupboard door to keep expensive items under lock and key.

4.5. Extra storage in the roof

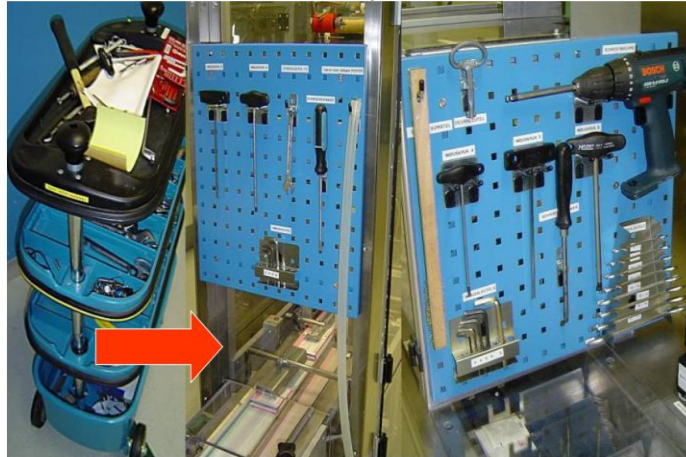
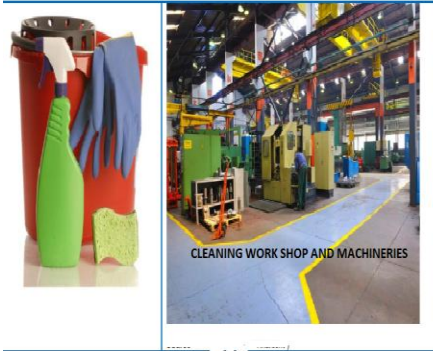
Add a storage shelf with pulley stolid unsightly boxes. A hanging shelf, with pulleys, that can be lowered easily is ideal for accessing storage boxes or crates that may be needed more often but take up valuable space.

Lightning Mount spotlights

on their after above the work surface to ensure that the area has adequate light. A standard store light is likely to cast shadow over the work area. These lights, which provide effective additional task lighting, are relatively inexpensive and easy to install.



Tools at hand on every machine



SORTED, SET IN ORDER (ARRANGED) CLEANED
TOOLS WHICH ARE READY FOR USE



Learning Guide-09

LG Code: EEL BEE1 M09 LO 09

TTLM Code: EEL BEE1 TTLM02 1019v1

LO₁: Follow standardized work process
and procedures



Instruction Sheet

Learning Guide #09

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Maintaining materials for common use in designated area based on procedure.
- Performing work according to standard work procedures
- Reporting abnormal incidents to immediate supervisor

This guide will also assist you to attain the learning outcome stated in the cover page.

Specifically, upon completion of this Learning Guide, you will be able to –

- Maintain materials for common use in designated area based on procedures
- Perform work according to standard work procedures
- Report abnormal incidents to immediate supervisor

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below
3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-checks” in each information sheets.
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
6. If you earned a satisfactory evaluation proceed to “Operation sheets and LAP Tests if any”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity.
7. After you accomplish Operation sheets and LAP Tests, ensure you have a formative assessment and get a satisfactory result;
8. Then proceed to the next learning guide.



Information Sheet-1	Maintaining materials for common use in designated area based on procedures
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1.1. Maintain Materials for common use

- Creating a consistent way of implementing the tasks that are performed on a daily basis including “Sort,” “Set in Order,” and “Shine”
- “Do the right things the right way, every time!”

Standardization means creating a consistent way of doing or carrying out tasks. When we think of standardization, we have to think about anyone.

For example, machinery standardization means anyone can operate the machinery.

Also if we have operation standardization this means anyone can perform the operation.

Even for people to get along together, they need to standardize their behaviors, at least to some extent

In implementing set in order pillar, we use visual controls so that communications became easy and smooth. For example, we can visually know where items are placed and where to return them and so on. A visual control is any communication device used in the workplace that tells us at a glance how work should be done.

Through visual controls, information such as where items belong, how many items should be placed there, what the standard procedure is for doing something, the status of work in process etc can be communicated.

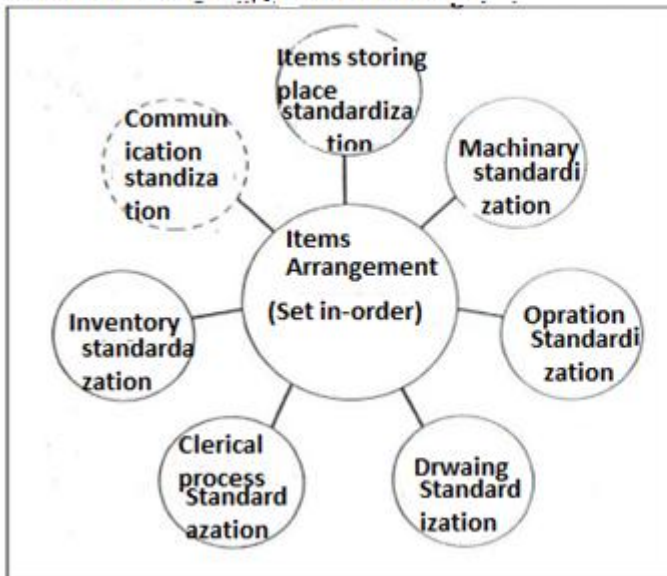
1.2. Benefit of standardization

- Easier to train new employees
- Less room for errors and scrap
- Work area is more organized
- Work area is safer

Just like in our personal lives, if the rules are in writing and right in front of us, we are much more likely to understand and follow them, especially if they have our signature on them!



Standardize all your activities



Standardize items storage



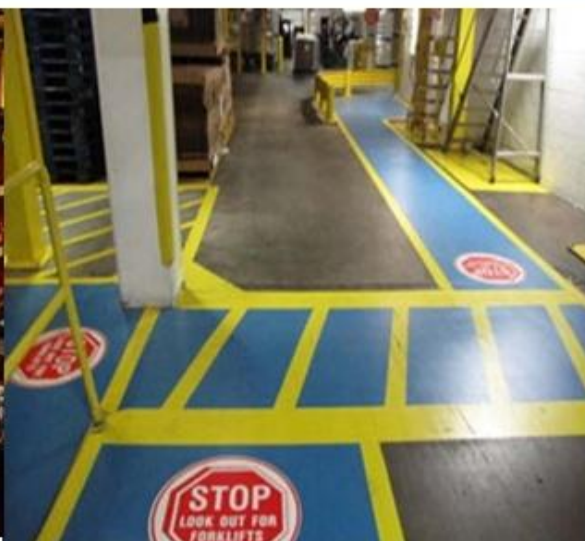
The emphasis here is on visual management, an important aspect to attain and maintain standardized conditions to enable the individuals always act quickly (Osada, 1993).

Standardize - Seiketsu

every thing is clear, clean & in its place in
Standardize store room



Source: Lean Expertise
(www.tpmonline.com/articles_on_total_productive_maintenance/leanmfg/the5sindetail.htm)



Source: Concare Inc. (<http://www.concare.com>)



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Applying standard work procedures, anyone can perform a work in the same work standards.

Examples: Different groups or individual students are instructed to perform the same practical project using the given operational procedures to produce the same output.

Industrial workers use the Operational procedures to produce the same product with the same standards reporting abnormal accidents

Information Sheet-3	Reporting abnormal incidents to immediate supervisor
----------------------------	------------------------------------------------------



3.1. Reporting abnormal accidents

According to the Working Conditions Act, an accident at work is an unintended, sudden event which happens to an employee in the context of his/her duties which:

- has caused damage to health and has led to absence through illness,
- or has more or less directly resulted in death

In the case of accidents which lead to death, permanent injury or hospital admission, Maastricht University is legally bound to report them immediately to the SZW Inspectorate (formerly the Labor Inspectorate).

✓ **Notes:**

An accident at work is an event that results in damage to the health (physical or psychological) or death of the employee. Furthermore, the event must have led to the employee ceasing work and not returning, or not commencing work. If the employee returns to work the day after the event then this does not count as an accident.

The same applies if the employee is only ill for a Saturday, Sunday or public holiday. The latter only applies if it is not considered a working day.

N.B.

The number of accident stoppage days to be recorded is therefore the same as the number in which the employee would normally be expected to work.

✓ **Serious physical injury**

Serious physical injury means: damage to health, which after the event leads to hospital admission for observation or treatment, which can reasonably be judged to be permanent.

✓ **Notes:**

Permanent damage to health that does not lead to hospital admission (but should still be deemed serious injury) can include permanent hearing damage resulting from an explosion, a permanent psychological disorder or amputation treated as an outpatient.



A permanent injury must be ascertained by a competent medical practitioner. Investigation and reporting to the AI also applies if hospital admission as a result of the accident takes place at a (later) time/day other than that on which the accident occurred.

3.2. Situation causing a hazard to health

A situation which has caused determinable effects on a person's health.

✓ **Notes:**

It is essential that this relates to a situation in which there is a reasonable expectation that the health of the employee cannot be guaranteed in the context of the work.

Incident (near miss)

Although accidents are, of course, always undesirable incidents, the term 'incident' is reserved here for:

- ✓ those arising undesirable situations which (immediately) endanger the safety and/or health of employees
- ✓ those incidents which may have caused an accident under unfavorable circumstances.
- ✓ These incidents include what we call 'near misses'.

3.3. Hazardous situation

A situation from which an accident, near miss or vocational illness may arise.

Environmental incident

Environmental incidents must be reported to the competent authority, the Municipality of Maastricht.

An environmental incident can include the following events (this list is not exhaustive).

The unintentional release of (chemical) substances to:

- water/sewers (spill in lab, leaking equipment, cleaning or leaking waste fat or oil vessels)



- air (extraction from lab or leakage in cooling equipment)
- soil (oil from motor vehicles or leaking vessels)
- Unpleasant odor
- Noise.

3.4. Purpose of reporting procedure

The purpose of the procedure is to take measures to prevent undesirable events from being repeated. This can also improve risk management:

- by preventing repetition through analysis
- by drawing up or amending instructions (guidelines) to improve prevention
- by gaining insight into the results of the implemented safety measures
- by obtaining an accurate picture of the circumstances of the accident in relation to dealing with claims
- by complying with legal requirements.

The report is most certainly not intended to be used to find out who is 'to blame' for the event (accidents at work, (environmental) incidents and dangerous situations). The point of the report is to be able to find out how Maastricht University can improve its risk management.

3.5. The duty to report accidents, incidents and hazardous situations

- **Employee**

It is the duty of every employee to report accidents, near misses and hazardous situations to his/her superior. It is the duty of this person to pass these reports on to the prevention officer/occupational health & safety officer of his/her department/unit. Every report, regardless of how minor the consequences are, can have a preventive effect with regard to serious accidents.

- **Employer**

The employer has a duty to report to the district manager of the Labour Inspectorate if:

- an employee suffers an accident which results in serious physical or psychological injury or death.



3.6. Serious physical or psychological injury means:

- admission to a hospital for treatment or observation (not outpatient treatment), or
- (suspected) permanent physical injury, or
- (Suspected) permanent psychological injury.

Events such as the above must be reported immediately. At UM these reports are made to the SZW Inspectorate (formerly the Labor Inspectorate) by the occupational health and safety executive.

This duty does not apply to staff employed under the supervision of another organization, which will report in this case.

- **(Internal) handling of the report in the case of an accident at work subject to a report**
 - i. Events which are subject to a report as stated above are immediately reported by the occupational health and safety executive to the portfolio holder of the Executive Board and the chair of the crisis coordination team (CT) of the relevant unit.

3.7. The occupational health and safety executive:

Analyses the event

iii. Completes the report (drafts an accident/incident report) with those involved

IV. Sends a copy of the report to the parties concerned:

- Those involved
- The immediate manager or supervisor
- The director of the unit
- The prevention officer who reports to the relevant emergency response workers HRM and the Staff Representation Office (F or D board)



v. Records or archives the report and the accompanying reports in the central **archive**The **prevention officer**:

vi. Coordinates the measures to be taken following the results of the analysis

vii. Feeds back to those concerned

viii. Evaluates the measures taken

(see VI to VIII) also 'registration of accident and incident reporting in the RI&E'

3.8. Registration of accidents and incidents

- **Company register**

Registration of accidents, incidents and hazardous situations applies to internal staff and hired personnel (agency workers, trainees etc.).

This register must include the details of the reported accidents at work and accidents at work which have led to an absence of more than three working days, and the nature and date of the accident.

- **Risk management**

If an accident has taken place, this means that risk management can be improved.

Accidents provide important information which can improve risk management. You can also learn from undesirable incidents which may have led to serious accidents in less favorable circumstances. Therefore, Maastricht University has decided to record such incidents and hazardous situations.

- **Recording in the RI&E**

When writing the RI&E or a progress report arising from it, (at least) a list of accidents is included stating the nature and date of the accident. It is also recommended that you state in the RI&A or progress report the incidents and hazardous situations which have taken place during the year of the report. The report should include at least the following:



- ✓ A description of the measures taken in response to accidents and incidents
- ✓ A description of the measures taken in response to events involving major material damage
- ✓ A list of hazards reported by employees
- ✓ A numerical list of the accidents which have taken place within the company and the absence through illness as a result of accidents.



Self-Check 1.

Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

➤ **Choose the best answer from the question below**

1. Which one of the following is not improve risk management:
 - A. by preventing repetition through analysis
 - B. by drawing up or amending instructions (guidelines) to improve prevention
 - C. by gaining insight into the results of the implemented safety measures?
 - D. none**
- 2.



Instruction Sheet	LG10: Perform work spontaneously
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Performing Work as per instruction
- Following and complying company and office *decorum*
- Perform Work in accordance with occupational health and safety (OHS) requirements

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Performing Work as per instruction
- Following and complying company and office *decorum*
- Perform Work in accordance with occupational health and safety (OHS) requirements

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below
3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-checks” in each information sheets.
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-checks)
6. If you earned a satisfactory evaluation proceed to “Operation sheets and LAP Tests if any”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity.
7. After you accomplish Operation sheets and LAP Tests, ensure you have a formative assessment and get a satisfactory result;
8. Then proceed to the next learning guide.



Information Sheet-1	Performing Work as per instruction
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Information Sheet-2	Following and complying company and office <i>decorum</i>
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2.1. introduction

Any work in an organization/Company is performed according to the rules and regulation. Employees should know their Organization/Company rules and regulations in order to know their duties and responsibilities. Almost in all organizations/Companies there are rules and regulations about: Recruitment, Wages, Salary scale and working Hours, Promotion, Workplace Safety & Health, Employee Benefit & Security, Employee Protection, Workers' Compensation, discipline (Misconduct) cases

Therefore It is not only enough to know the rules and regulation but also Everyone should strictly practice to act according to it, otherwise the outcome may results in negative consequence for the his/her organization and for him/her self too.

2.2. COMPANY/ OFFICE UNIFORM

Uniform is work area cloth which is designed and made as unique as that of the nature of the work. It can be used as an identification for the given Organization.

Benefits to the Company:

There are many benefits associated with having a company uniform not only for the company itself but also for the employees and customers.

- ❖ Your staff will become walking billboards for your brand. When they go to get lunch or go to appointments, potential customers will be exposed to your company through the branding on their uniform.
- ❖ Your employees will stand out in a crowd. This is particularly important at trade shows and other marketing related events. Your staff will also be unique and distinct as no one from the general public will have the same outfit as them.



- ❖ Your staff will be on time! No more wasted time trying to select an outfit in the morning.

2.3. Benefits to the Employee:

- ✓ Employees feel a sense of unity. Why do you think sporting teams, the army and schools all have uniforms? By putting on a uniform employees feel like they are adopting a different persona. There are certain industries that have completely migrated to uniforms such as the hospitality (e.g. hotels, bars and clubs) industry where uniforms are seen as part of their service provision.
- ✓ Uniforms have a positive impact on people's behavior - when they are wearing a uniform they know that their behavior may reflect well or poorly on their employer and are therefore more conscious of their actions.
- ✓ Uniforms promote equality - there is less pressure for employees to spend money so they can look a certain way.

- **Benefits to Customers**

Uniforms also help your customers; they know who to approach for help. Uniforms are particularly important for events because your customers may be at a location unknown to them and if everyone is dressed casually it becomes awkward trying to work out who is actually hosting the event.

The important point to remember is that a Uniform does not equal boring. Times have changed from the hi-waisted pleated front ladies' pants that were the only style available; there are now much more designer styles available. Low-rise pants are common now as are many of the latest fashion features and trends. Corporate Uniforms tend to follow current fashions and trends so if hem lines are up then so are the hems in the Uniforms available.

Naturally, Uniform styles will always lean towards the classical middle ground so they will last the test of time as far as fashion trends go, so the financial investment is justified in the long term. The fact that Uniforms provide your staff with corporate apparel that is approved by management is an important aspect especially when you take into consideration how important image and client perceptions can be. Inappropriate attire can really test business relationships so if that has ever been an issue then Uniforms are the solution.



2.4. WORK AREA BEHAVIOR

While an occasional lapse in politeness is excusable, a generally lax attitude toward manners within the workplace may have a toxic effect. The average employed person spends approximately one-third of her or his time on the job, usually with the same group of co-workers. Over time, petty annoyances and small grievances related to shared workspaces and common area etiquette may begin to accumulate, resulting in tension, irritation, and mistrust. These feelings may impact both productivity and morale and could result in behaviors that affect the entire workplace, such as:

- Angry outbursts or blow-ups between co-workers
- Bullying
- Gossip
- Backstabbing
- Passive-aggressive behavior

A good first step in avoiding these situations is to establish an expectation of courteous behavior between team members and hold employees accountable when lapses occur. However, it is important to keep in mind that people of varying ages and from differing backgrounds may have vastly divergent ideas about what is and is not permissible within the workplace. Therefore, establishing ground rules for appropriate behavior within shared spaces may help to create a more harmonious environment. While some of these may be established by office protocol, others may be at the discretion of individual team managers. Some areas you may want to consider addressing before conflict arises include:

Noise and music. Whether your employees are in traditional offices, a cubicle area, or a shop floor, noise can be a significant distraction when people are trying to work. Encourage employees to keep their voices at a reasonable level when conversing with others or when on the phone. If you allow staff members to listen to music in their work areas, ask that they keep the volume at a level that is not distracting to others or that they use headphones.



2.5. Work in team:

It is important for team members to respect each other's work areas. Remind staff that it is polite to knock or ask permission before coming into someone else's private workspace. If two employees share a work area, encourage them to find ways to keep from interfering with each other's personal space. Should disagreements arise, meet with the employees and try to establish ground rules for handling their shared space. (See "How Do I Say That" for suggestions on addressing these sorts of concerns.)

- **Meetings:** Establishing a good tone for meetings will help keep them on track and make them a productive use of time. Emphasize the importance of punctuality and of concluding meetings on time, both for productivity reasons and as a courtesy to fellow co-workers. Encourage people to stay focused on the topic at hand and only include those who actually need to attend. If you notice friction between co-workers during a meeting, address it privately.
- **Organization:** People have differing styles, and sometimes these will clash at work. Some people may prefer to be neat and organized, while others may have a more haphazard approach to accomplishing tasks. Establish clear expectations for the "spit and polish" of finished products while allowing employees the freedom to apply their personal style to how they accomplish their work. If two employees are clashing over organization issues, try to establish a middle ground that balances the need for order with the desire for creativity.
- **Communication:** issues can be one of the biggest stumbling blocks to collaboration and teamwork. When conflicts arise because of differing communication styles, encourage your team members to listen to each other without interruption. Other ways to encourage good communication include:
 - ✓ Avoiding jumping to conclusions
 - ✓ Asking open-ended questions that will increase opportunities for discussion
 - ✓ Using language that demonstrates respect while avoiding negative or derogatory terms



- ✓ Giving co-workers full attention when they are speaking

As a leader, perhaps the most important thing you can do to ensure civil behavior in your workplace is to lead by example. You cannot expect that your employees will be “one big happy

family” or that everyone will always get along. However, your example can demonstrate the importance of being compassionate and tolerant toward fellow co-workers. Show courtesy to all employees by saying “please” and “thank you” and by always following office etiquette and rules for common areas. Express appropriate concern when an employee is ill or has experienced a loss, such as the death of a loved one. Finally, encourage your staff to treat each other as they would wish to be treated and to work together as a team to make your workplace a pleasant place to spend time.



Self-Check 1.

Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

➤ **Choose the best answer from the question below**

1. Employees should know their Organization/Company rules and regulations in order to know their duties and responsibilities.
 - A. **TRUE**
 - B. FALSE
2. Which of the following is does not encourage good communication in team?
 - A. Avoiding jumping to conclusions
 - B. Asking open-ended questions that will increase opportunities for discussion
 - C. Using language that demonstrates respect while avoiding negative or derogatory terms
 - D. **none**
3. Which of the following is Benefits to the Employee
 - A. they know who to approach for help
 - B. **Employees feel a sense of unity**
 - C. your customers may be at a location unknown to them
 - D. All



Information Sheet-3	Perform Work in accordance with occupational health and safety (OHS) requirements
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3.1. PERFORMING WORK IN ACCORDANCE WITH OHS.

- **OHS RESPONSIBILITIES** The OHS Act 2004 imposes duties on those who have health and safety responsibilities. This section details duties of employers, management committees and employees (including contractors and volunteers). Employers ultimately, responsibility for providing a safe workplace rests with the employer, as they exercise control over the workplace. Under the OHS Act 2004 and regulations, employers must ensure the health, safety and welfare of all employees by providing, so far as is reasonably practicable:
 - ✓ Working environment that is free from health and safety risks;
 - ✓ Safe plant and systems of work;
 - ✓ Measures to ensure the safe storage and handling of hazardous substances;
 - ✓ Information, instruction, training and supervision for all employees;
 - ✓ Processes for consulting with employees, involving them in decisions and informing them of decisions that may affect their health and safety;
 - ✓ Processes for identifying hazards, assessing risks and eliminating or controlling risks;
 - ✓ Processes for regular review of risk control measures;
 - ✓ Personal protective equipment (PPE), including clothing and footwear where necessary;
 - ✓ Amenities, including toilets and eating areas, which are maintained in a safe and hygienic condition; and
 - ✓ Emergency procedures and first aid facilities. Employers must also ensure people other than employees – such as clients, volunteers, contractors, suppliers and visitors – are not exposed to risks arising from the activities of the workplace. Employers must ensure that all people are given the necessary information and instruction regarding:



- ✓ Site safety and safe use of any equipment provided;
- ✓ Emergency procedures; and
- ✓ Any other health and safety issues to which they could be exposed. It is up to the employer to ensure managers, co-ordinators and supervisors are capable of undertaking assigned health and safety responsibilities. These responsibilities may include making sure that:
 - ✓ Employees are properly trained and supervised;
 - ✓ Identified hazards and risks in areas under their control are managed;
 - ✓ Employees and health and safety representatives (HSRs) are consulted on issues that could affect their health and safety; and
 - ✓ Health and safety concerns referred to them are addressed without undue delay. This may require specific OHS training and instruction. They must also have the necessary resources to enable them to implement the workplace's OHS policies and procedures.

3.2. Employees

- The OHS Act 2004 requires employees to:
 - Take reasonable care of their own health and safety, and that of others in the workplace;
 - Cooperate with their employer's efforts to comply with health and safety requirements (for example, by following procedures, using equipment properly and participating in hazard identification and reporting); and
 - Not interfere with anything at the workplace, which has been provided in the interest of health, safety or welfare.

3.3. Slips, Trips and fall

Slips, trips and falls can cause a variety of musculoskeletal disorders (MSDs) and are a common cause of injury in the work place. Slippery floors, loose gravel, spills or shoes that



have poor grip can all contribute to the risk of slipping. Uneven surfaces, objects left on the floor or jutting out into aisles or paths, pets, poor lighting and getting in or out of vehicles can all

contribute to the risk of trips and falls. Falls often occur when people use ladders, work over inadequately guarded drops or ledges or stand on chairs to reach something – for example, when changing a light globe.

3.4. Eliminate the hazard or risk

- Keep hallways and corridors clear of equipment, rubbish and electrical cords;
- Maintain floors in a safe condition – repair or replace loose flooring (such as torn or shifting carpets) and use non-slip surfaces where possible, particularly in wet areas. Minimize the use of dividing strips between floor surfaces as they can cause trips and make pushing wheeled equipment difficult;
- repair or replace damaged steps;
- ensure parking and outdoor areas are kept in good repair – fix potholes and level uneven surfaces; and
- Store items at a suitable height to avoid the need for climbing to reach them.

3.5. Reduce the risk

- Change the equipment or process
 - Replace loose mats with secured slip-free coverings;
 - Make sure stairs and steps have non-slip surfaces and edge strips where appropriate and that treads are of adequate depth; and
 - Ensure that a stepladder is available and used when required (instead of a chair). Isolate the hazard
 - Change the times when floors are routinely mopped (schedule these jobs for times when people are not using the area). Design for safety
 - Ensure there is adequate lighting throughout the workplace, particularly in stairwells and over exits;
 - do not keep items like filing cabinets in hallways; and



- Ensure there is safe access to all parts of the workplace and that rails and ramps are provided where appropriate. Change work methods
- Implement an immediate clean-up policy of any spills. Use personal protective equipment (PPE)
- Ensure employees wear non-slip footwear.

3.6. The following safety rules should be understood and strictly followed to avoid accidents while working.

- Avoid wearing loose clothing when working. Sleeves should be fit and shirts tucked in as much as possible. Remove ties, watches, rings, and other jewelry from your body.
- Report immediately injuries or accidents of any type to your teacher.
- Never put fasteners or any small metal articles in or near the mouth when working.
- Never throw tools of any type around. Make sure the sharp edge of cutting tools are away from the edge of the table or work bench.
- Keep working areas clean and free from disposable materials.
- Secure the help of your classmates when carrying heavy tools to avoid accidents.
- Never use dull or damaged tools.
- Do not use tools with loose handles and ragged. Report cases like these to the teacher and do necessary repair and adjustments, if possible.
- Know and observe safety measures specific for each tool or operation.

3.7 Safety Requirements

- For your protection, observe the following safety requirements:
- Follow all cautions, warnings, and instructions marked on the equipment.
- Ensure that the voltage and frequency rating of the power outlet matches the electrical rating labels on the system.
- Use properly grounded power outlets.



Self-Check 1.

Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

➤ **Choose the best answer from the question below**

1. Which of the following is Eliminate the hazard or risk?

- A. Keep hallways and corridors clear of equipment, rubbish and electrical cords;**
- B. Keep working areas clean and free from disposable materials.
- C. Secure the help of your classmates when carrying heavy tools to avoid accidents.
- D. Never use dull or damaged tools.

2.The following safety rules should be NOT understood and NOT strictly followed to avoid accidents while working.

- E. Report immediately injuries or accidents of any type to your teacher.
- F. Never put fasteners or any small metal articles in or near the mouth when working.
- G. Never throw tools of any type around. Make sure the sharp edge of cutting tools are away from the edge of the table or work bench.
- H. Keep working areas clean and free from disposable materials
- I. NONE**

3.Which of the following is does not reduce the risk?

- J. USE damaged tools.**
- K. Replace loose mats with secured slip-free coverings;



- L. Make sure stairs and steps have non-slip surfaces and edge strips where appropriate and that treads are of adequate depth; and
- M. Ensure that a stepladder is available and used when required (instead of a chair). Isolate the hazard